

Notice of Allowability

Application No.

10/645,075

Examiner

Michael V. Datskovskiy

Applicant(s)

ALFORD ET AL.

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/21/2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 21 August 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 12/05/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

06/22/05

**MICHAEL DATSKOVSKIY
PRIMARY EXAMINER**

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. William R. Allen, Reg. No. 48,389 on 06/22/2005.

The application has been amended as follows:

In claim 9, line 1: eliminate the words: "[heat-generating]";

In claim 12:

In line 3: eliminate the word: "[tower,]" and insert the words: "support structure";
eliminate the words: "[said housing capable]";

In line 4: eliminate the words: "[of generating heat]" a;

In line 7: eliminate the words: "[proximate said substrate]" and insert the words:
"inside said housing";

2. The following is an examiner's statement of reasons for allowance: The claims 1-20 are allowable over the prior art of record for at least the reason that the prior art fails to teach or suggest an amplifier module for attachment to a support structure of a base station in a wireless communications network, the amplifier module comprising a substrate; a heat-generating electrical component coupled to said substrate; a low-noise heat generating amplifier transistor coupled to said substrate; and a thermoelectric cooler positioned proximate said substrate and having a cold side thermally coupled

with said low-noise heat generating amplifier transistor and being thermally isolated from said heat-generating electrical component (claims 1-11 and 15-20); or an amplifier module for attachment to a support structure of a base station in a wireless communications network, the amplifier module comprising a substrate; a housing mounted on a tower and capable of transferring heat; a low-noise heat generating amplifier transistor coupled to said substrate; and a thermoelectric cooler positioned proximate said substrate and having a cold side thermally coupled with said low-noise heat generating amplifier transistor and being thermally isolated from housing (claims 12-14).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Arai et al (Japan Patent JP3592180011A) teach a low noise amplifier module Figs. 2-4, comprising: a housing 10; a substrate 12 ; a low noise heat- generating amplifier mounted on said substrate; and a thermoelectric cooler 15 positioned proximate said substrate 12 and having a cold side thermally coupled with said low-noise heat generating amplifier transistor. Arai et al do not teach either a heat-generating electrical component coupled to said substrate, wherein said thermoelectric cooler's cold side being thermally isolated from said heat-generating electrical component; or said amplifier module's housing mounted on a tower and capable of transferring heat; wherein a thermoelectric cooler positioned proximate said substrate

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and having a cold side thermally coupled with said low-noise heat generating amplifier transistor and being thermally isolated from said housing.

4. The prior art made of record provided in the PTO Form-892 and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Datskovskiy whose telephone number is (571) 272-2040. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael V Datskovskiy
Primary Examiner
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06/24/2005